**Center Innovation Fund: GSFC CIF**

# Infrared Microscope Development for Instrument Component and Geological Sample Characterization

Completed Technology Project (2011 - 2012)

## Project Introduction

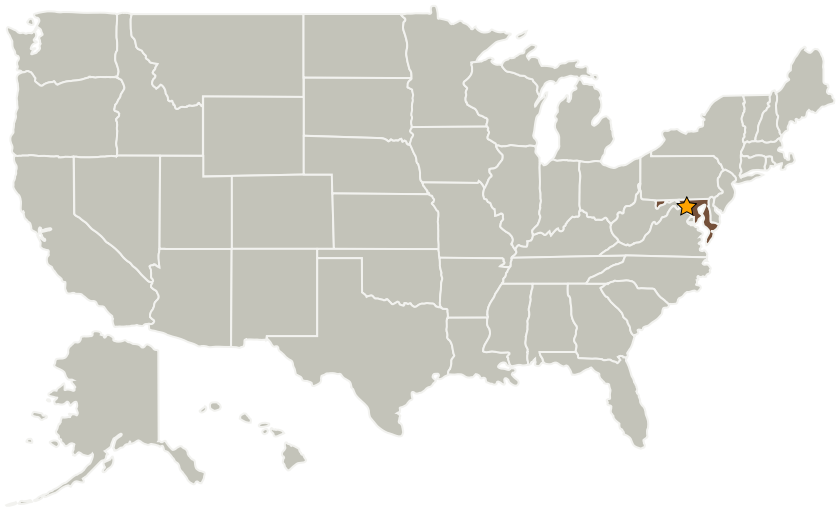
Repeatability is essential in laboratory measurements and evaluations, thus a stable, permanent microscope structure will insure reliable results for instrumentation components or geological samples of interest.The Infrared Microscope will be built at GSFC and used as instrument for scientific investigations and instrument development. This IRAD would be used to create a stable structure to measure remote sensing/spacecraft instrumentation components and geological samples of interest.

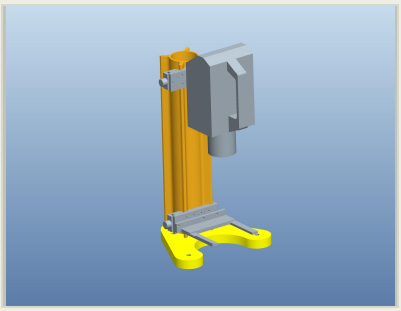
The laboratory Infrared Microscope that will be built will measure components for remote sensing instrumentation and measure geological samples that would represent samples collected during field campaigns and remote sensing missions. Infrared Microscopy will assure NASA provides quality components and instruments for future remote sensing missions and insure integrity of the instrumentation built. The quality control of instrument components reduces risk and this can be incorporated into a spaceflight mission proposal as a pathway to mitigate risk.

## Anticipated Benefits

N/A

## Primary U.S. Work Locations and Key Partners





Project Image Infrared Microscope Development for Instrument Component and Geological Sample Characterization

## Table of Contents

# Infrared Microscope Development for Instrument Component and Geological Sample Characterization

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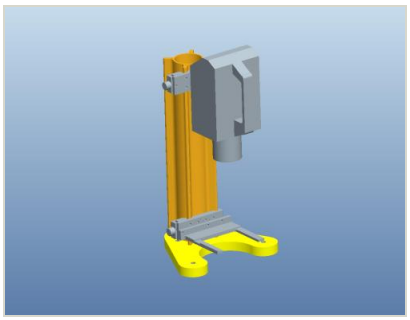
| Organizations Performing Work | Role | Type | Location |
|---|---|---|---|
| ★Goddard Space Flight Center(GSFC) | Lead Organization | NASA Center | Greenbelt, Maryland |

| Primary U.S. Work Locations |
|---|
| Maryland |

## Images



**5238.jpg**
Project Image Infrared Microscope Development for Instrument Component and Geological Sample Characterization
*(https://techport.nasa.gov/image/1322)*

## Project Website:

http://www.nasa.gov/centers/goddard/home/index.html

## Organizational Responsibility

**Responsible Mission Directorate:**
Space Technology Mission Directorate (STMD)

**Lead Center / Facility:**
Goddard Space Flight Center (GSFC)

**Responsible Program:**
Center Innovation Fund: GSFC CIF

## Project Management

**Program Director:**
Michael R Lapointe

**Program Manager:**
Peter M Hughes

**Project Manager:**
Terry Doiron

**Principal Investigator:**
Ramsey L Smith

**Co-Investigators:**
Ari D Brown
Matthew T Showalter

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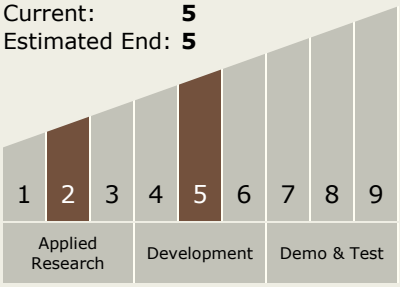
## Technology Maturity (TRL)

Start: **2**
Current: **5**
Estimated End: **5**




## Technology Areas

**Primary:**

- TX04 Robotic Systems
  - TX04.3 Manipulation
    - TX04.3.4 Sample Acquisition and Handling